

# INTERACTIVE ALV REPORT CUSTOMIZATION OF BUSINESS PROCESS TRACING ON SAP S/4HANA WITH ITERATIVE AND INCREMENTAL METHODOLOGY IN TELECOMMUNICATION COMPANY

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## ABSTRACT

*PT XYZ merupakan Badan Usaha Milik Negara (BUMN) yang bergerak di bidang telekomunikasi. Untuk mengelola bisnis yang berjalan, perusahaan menggunakan SAP S/4HANA. Dalam pengimplementasian SAP S/4HANA, ditemukan beberapa permasalahan dalam modul controlling, khususnya pada proses cost allocation yang terjadi di Activity-Based Costing (ABC). Hal utama yang menjadi masalah adalah sulit untuk melakukan pelacakan proses bisnis dalam aktivitas cost allocation, sehingga tidak diketahui asal mula proses bisnis dan kemana proses bisnis akan diteruskan. Hal ini yang menjadi alasan dalam dibuatnya Interactive ALV Report untuk melacak proses bisnis pada cost allocation. Pembuatan Interactive ALV report untuk pelacakan proses bisnis ini akan memanfaatkan ABAP Programming Module dan akan menggunakan Metodologi Iterative dan Incremental. Report pelacakan proses bisnis ini akan memiliki fitur dimana pengguna dapat melacak proses bisnis dari sumber proses bisnis hingga proses bisnis terakhir. Hasil dari perancangan ini adalah tracing business report yang dapat menampilkan hanya data yang dibutuhkan oleh divisi keuangan untuk proses pelacakan proses bisnis. Melakukan pelacakan proses bisnis akan membantu divisi keuangan untuk mendistribusikan biaya dalam proses alokasi biaya. Hasil ini diharapkan dapat memberikan manfaat kepada PT XYZ dan perusahaan lain yang memiliki permasalahan yang sama, ataupun dapat menambah wawasan dalam ABAP programming khususnya pada modul controlling.*

**Keywords:** ABAP, Activity-Based Costing, ALV Report, ERP, SAP S/4HANA.

## ABSTRACT

*PT XYZ is a State-Owned Enterprise (BUMN) that is focused on the telecommunications sector. To manage the ongoing business, the company uses SAP S/4HANA. In implementing SAP S/4HANA, several problems were found in the controlling module, particularly in the cost allocation process that occurred in Activity-Based Costing (ABC). The main problem is that it is difficult to track business processes in cost allocation activities so that the source and destination of the business processes are not known. Based on this problem, it will be the main reason for making the Interactive ALV Report for tracing business processes. This Interactive ALV report for tracing business processes will use ABAP Programming Module as the reference and Iterative and Incremental as the methodology. This business process tracing report will have a feature where users can track business processes from the source of the business process to the last business process. The result of this design is a tracing business process report that can display only the data needed by the finance division for the business process tracing process. This Interactive ALV report will help the finance division distribute costs in the cost allocation process. The results of this study are expected to provide benefits for PT XYZ and other companies that have the same problem or can add insight into ABAP programming, especially on the controlling module.*

**Keywords:** ABAP, Activity-Based Costing, ALV Report, ERP, SAP S/4HANA.

## I. INTRODUCTION

**P**T XYZ is a state-owned information and communication technology services company. As one of the biggest telecommunication service providers, there are lots of transaction that has been going on in the company. To maintain a good company performance, an integrated information system needs to be implemented in the company to handle the company business processes and can maintain real-time company data. There is a regulation for state-owned enterprises that states SAP is one application that can be utilized in supporting business strategic objectives with solutions in the industry [1]. To support major business processes and handle all real-time processing company data, PT XYZ used Enterprise Resource Planning (ERP).

Enterprise Resource Planning or ERP is a tool that can integrate data from an organization so that it can produce solutions in business to increase success or excellence in its business environment. ERP is an integrated

packet software designed to provide complete integration of all data related to enterprise information systems [2]. As we can see in Figure 1, Enterprise Resource Planning (ERP) supports all business processes that run in an organization, where this can integrate modules such as procurement, production, sales, financial and accounting [3]. The use of the ERP system in this study can also provide added value for PT XYZ because it can provide high efficiency in business processes that run within the company which will have an impact such as increasing profits for the company. This system can assist companies in making decisions based on data [4]. If the company use an ERP, it is expected that company operations will be more effective, efficient, and it can also allow information interaction and collaboration within the company [5].

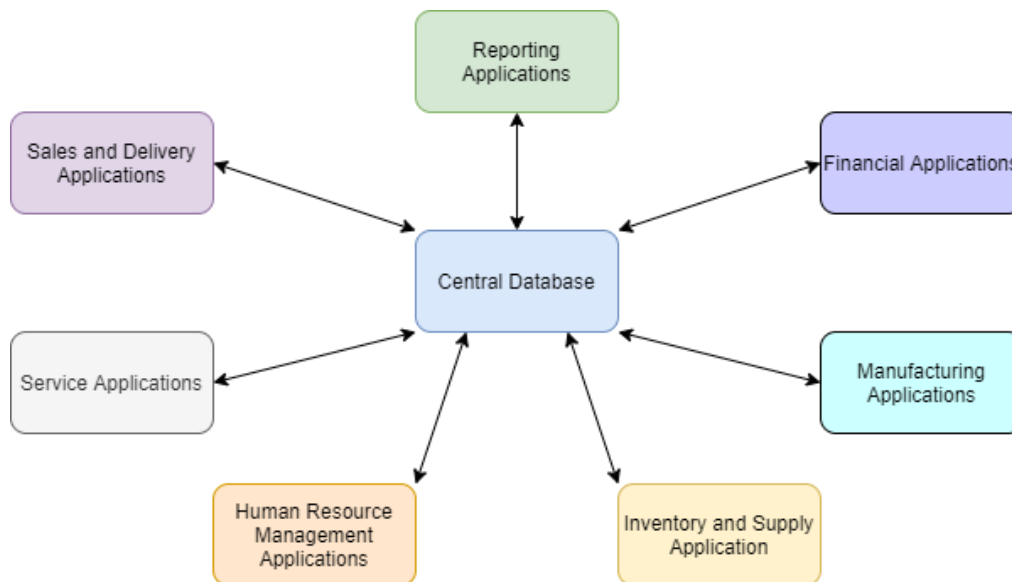


Fig. 1 ERP Model

There is various ERP software such as SAP and Odoo. System Application and Product or SAP is an ERP software that supports basic modules such as Financial, Human Resource, Purchasing, Inventory Control, Production Planning, Marketing, to Sales modules. This software has the goal of handling company data in real-time. SAP creates a common centralized database for all applications running in an organization. SAP system is an integrated system that provides information to help an organization to control the performance of business processes [6]. The purpose of SAP is to process data into information that has better value and is more effective than before. By using SAP, companies can manage company information in an integrated manner to make it easier for company employees to receive information accurately.

PT XYZ has been using SAP R/3 since 2002 to support the company business until they decided to implement SAP S/4HANA in 2017. The large data scale is one of the reasons why PT XYZ uses SAP S/4HANA. SAP S/4HANA is the next generation business suite product after SAP R/3 which provides innovative and robust solutions that support end-to-end business process integration. SAP S/4HANA is a business ERP suite based on the SAP HANA in-memory database that allows companies to perform transactions and analyze business data in real-time. This software claims full integration of all information flow through a specific entity or a group of subsidiaries within an organization assuming that all modules are used [7].

One of the modules that is used by the company is controlling module. SAP Controlling (CO) is an important SAP module for organizations. This module supports the coordination, monitoring and optimization of all processes in an organization. SAP CO involves recording the consumption factors of production and services provided by an organization. The Controlling (CO) module helps provide information to management in charge of decision making because this module can minimize costs and maximize profits with planning and actual analysis [8]. The main reporting purpose of SAP Controlling is for internal managerial reporting such as profit center accounting or profitability analysis [9]. This module has a function as a tool in decision making and includes steps for planning, controlling, and reporting results or reports [10]. Controlling module is also used for tracking the cost that related to the production of a product [11].

There are lots of processes that is migrated from SAP R/3 to SAP S/4HANA, such as cost allocation process in Activity-Based Costing in controlling module. Activity-Based Costing (CO-OM-ABC) is a submodule in controlling module that serves to provide process focus as well as a cross-functional view of overhead. Activity-Based Costing is a method that can be used by companies to calculate a cost accurately so that they can take important

decisions related to the company's business processes. Activity-Based Costing allocates the value of the process based on the sources and drivers of the process so that it can determine the allocation of costs along the value-added chain rather than the overhead rate incurred [12]. The main function of Activity-Based Costing is to allocate all costs from various resources used to carry out activities or run a business that aims to increase profits for the company. However, there's a problem in implementing cost allocation in Activity-Based Costing. It is very difficult to see the flows of cost allocation process in Activity-Based Costing (ABC). Cost allocation consist of three main components, such as Cost Center, Business Process, and Product. For getting into the final steps of this process, which is product, there's a lot of business process that must be maintained. One of the processes that must be finished for reaching into products is by making an actual assessment cycle.

Actual assessment cycle is one of the processes that helps to distribute costs through cost elements from a given cost center to a different cost object. Assessment cycle consists of segmentation, each of which has a unique relationship between receivers and senders [13]. Actual assessment cycle can be used to allocate expenses in an individual cost center to different cost centers. Inside assessment cycle, there are segments that have the details involving to the costs and how they can be allocated. In actual assessment cycle, there are some data that must be filled manually, namely business process. The business process data in this process is hard to be maintained. For knowing what business process that is used, the financial division must check the business process from Standard Hierarchy Business Process in SAP. The flow of the existing business process in the cost allocation is very difficult to check, which business process will be the sender or the receiver. Because of these problems, the finance unit of PT XYZ found it difficult to processing the data quickly. Based on the problems occurs, PT XYZ wants a report that can trace the business process, so this report can show the sender and receiver of the business processes, without displaying documents repeatedly, and can be filtered according to the year and period the document was made. For making a new reporting program, the company is going to need ABAP modules in their SAP system.

ABAP is a programming language used for making programs on SAP. ABAP is used to make a report related to SAP. The ABAP work environment apart from report generation includes interfaces, conversions, enhancements, forms, and workflows. ABAP originally designed for report development in SAP [14]. ABAP (Advanced Business Application Programming) is the name of SAP's fourth generation programming language. It was specifically developed to enable mass processing of data in SAP business applications. By working with ABAP on SAP NetWeaver, companies that implements SAP ERP and SAP S/4HANA can customize the system to meet their needs. In ABAP, there is a tool that is common to use, namely ABAP ALV or ABAP List Viewer. ABAP List Viewer offers many functions such as sorting, aggregation, personalization, and data export [15]. By using ABAP Language, company can make new reporting for their business as many as they want.

As a solution to overcome problems in accessing data, this research is going to focus on customizing report using ALV Report. This report is made for tracing the inflows and outflows of the business process to help the financial unit for processing Cost Allocation in Activity-Based Costing (ABC). Iterative and incremental methodology will be used for making this ALV Report because this methodology enables the work and development of functions that we want to run in the early stages of work, identify risks, and can make system improvements more quickly. This methodology is necessary for developing an ALV report for tracing business processes because this report will utilize important data in the SAP database regarding the product in the company, such as posting period, amount, until business process, which is the core data for the business process tracing. The result of this research is expected to simplify tracing business processes for Cost Allocation so it can help the financial division at PT XYZ to trace the business process easily, comfortably, and fast.

## II. METHODOLOGY

The iterative and incremental development methodology is going to be used in this research due to its benefits, where it cannot be found in other software development methods, for example, waterfall or spiral methodology. There are several benefits of using this methodology such as allowing the user to adjust to the system in smaller incremental steps rather than leaping to a major new product because of new technology implementation, reducing the risk of failure because this methodology always doing testing after iteration, and having lessons learned at the end of each incremental delivery so it will produce positive revisions for the next increment [16]. Meanwhile, the waterfall methodology does not have the flexibility for doing the process and has less guarantee of success, while spiral methodology has a complex implementation and has less customer involvement than iterative and incremental methodology, which is not suitable for developing ALV report because it needs lots of feedback from the users to achieve the maximum result.

The Iterative and Incremental development model is one of the software development model approaches that

can simplify software development processes. This methodology focuses on the analysis and design of software systems [17]. Iterative and incremental is used to approach product development where it can reach a common goal [18]. Iterative and Incremental Development models are built to emphasize technical, communication, and teamwork skills so that they can deliver software products with good quality. This methodology can test new features repeatedly until it is ready to be deployed and used for end-user. This methodology allows developers to go back to the previous cycle if there's any improvement that must be changed for making the result more effective and efficient. This process will continue and end when the product is fully functioning. The goal of using this methodology in this research is to get the most perfect analysis and design result for making a tracing business process report. Figure 2 explains the steps of Iterative and Incremental methodology.

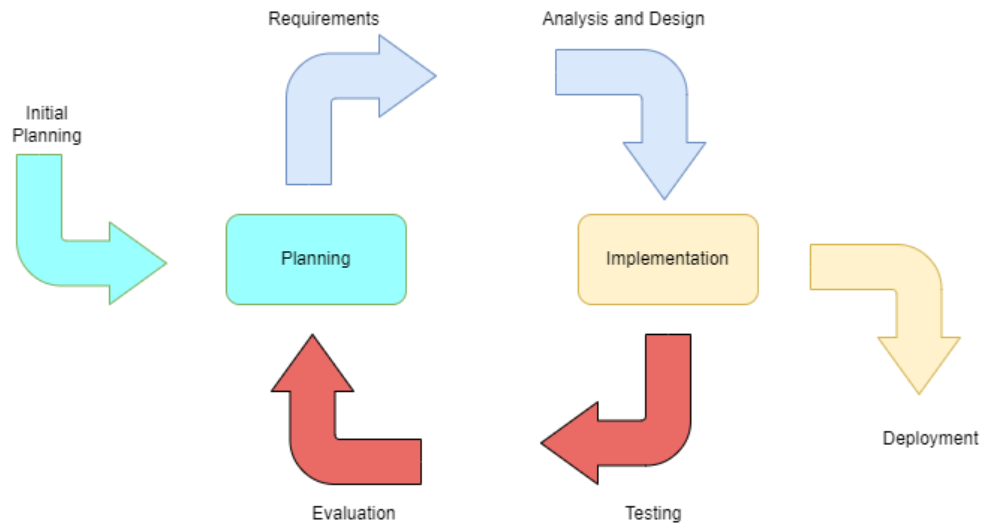


Fig. 2 Iterative and Incremental Methodology

Based on Figure 2, the researcher will make an initial plan by collecting ideas that can overcome problems in business processes. Furthermore, an analysis of the data needs will be carried out in developing the ideas that have been made previously. Analysis and Design regarding the making of the Interactive ALV Report will be carried out to find out whether the design is appropriate and helps PT XYZ in carrying out business processes. If the design meets the criteria, it will continue with the implementation and testing of the business tracing report.

### III. RESULT AND DISCUSSION

Based on the researcher method, The iterative and incremental development model method is implemented for making the design system that will suits the company needs. This study will describe the stages starting from finding the root of the problem to making a solution to get the results that PT XYZ wants.

#### A. Process Analysis

The process of cost allocation on Activity-Based Costing that has been implemented by PT XYZ can be seen in Figure 3. The basic data used to allocate costs to cost objects is called the allocation base or cost driver [19]. In the cost allocation process, there are business processes involved. It can be seen from Figure 3 that the business process is divided into three parts, namely business processes for resources, activities, and cost objects. The business process will later be carried according to the current transaction. The result of this cost allocation is that the business process from the cost center has been successfully allocated to the products available at PT XYZ.

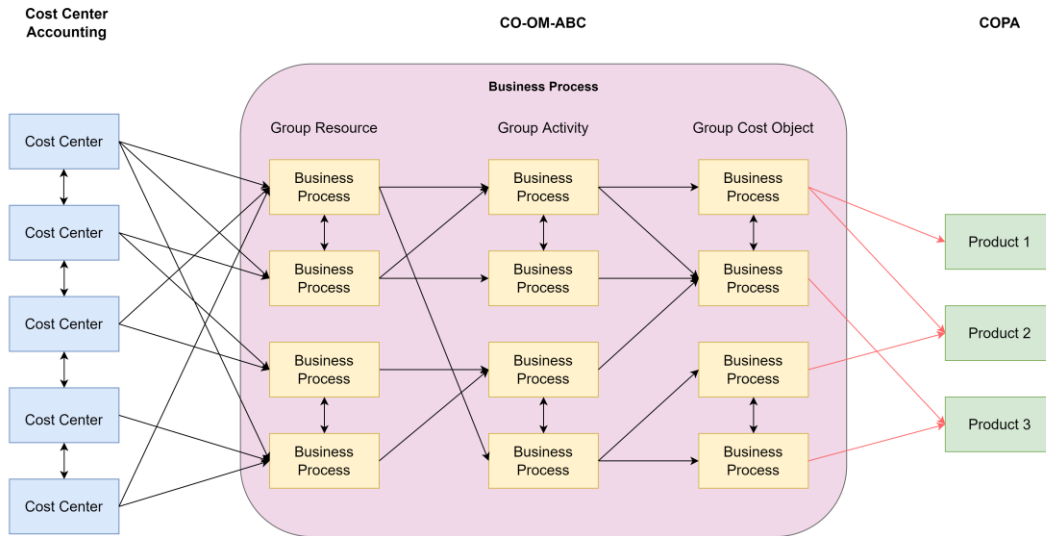


Fig. 3 Cost Allocation Process in PT XYZ

In carrying out this activity, it is necessary to track the flow of business processes. In this activity, there is no special report for tracing the business processes. Checking the business process flow can be done by accessing one of the tables available in SAP. In the existing process of checking the business process flow, there is no description of the business process and there is no report to check the incoming and outgoing flow. To carry out this process, the user can access the ACDOCA table via the SE16N transaction code. The data required in this process are listed in the following Table 1.

Table I.  
ACDOCA Table

No.	Field	Technical	Selection Value
1.	Ledger	RLDNR	'0L'.
2.	Fiscal Year	GJAHR	Year that wants to be searched, Example: '2020'.
3.	Period	POPER	Period that wants to be searched, Example: '09'.
4.	Posting Date	BUDAT	Date that wants to be searched, Example: '01.01.2020'.
5.	Business Process	PRZNR	Business Processes that want to be trace, Example: 'PUST0354'.
6.	Business Process Source	UPRZNR	Business Processes Source that wants to be trace, Example: 'PUST0354'.
7.	Business Process Partner	PPRZNR	Business Processes Partner that wants to be trace, Example: 'PUST0354'.

**B. Analysis of Existing 'Tracing Business Process' Flow**

A business process is an object in SAP that can act as a resource, activity, and cost object. In the SAP system, business processes are used as objects that will accommodate costs that reflect the activities of the object. The allocation process starts from the resource to the activity and ends at the cost object. For accessing the business process in this tracing report, we need several transaction codes. The transaction code used for tracing the business process can be seen in Table 2.

Table II.  
Transaction Code

T-Code	Description
CPH5N	Displays the Standard Hierarchy Business Process to view a list of business process data available in the SAP system.
KSU2	Open the Actual Assessment Cycle to see the business process in available segments in the intended cycle, period, and year.
SE16N	Open the General Table Display in SAP.

The existing flow for tracing the business process is complicated. This flow consists of a lot of stages. Based on existing business processes, there are several stages for accessing business process data which will take too much time for doing so. The business process will always be streamed to the product, as a sign that the business process flow has been completed.

In the cost allocation process, there is an allocation process document that contains results of the cost allocation which the cost must be balanced. This document is called a reversed document. These reverse documents also bring a problem to trace the business process. Accessing business processes is complicated because of the data redundancy that arises due to the reversed document.

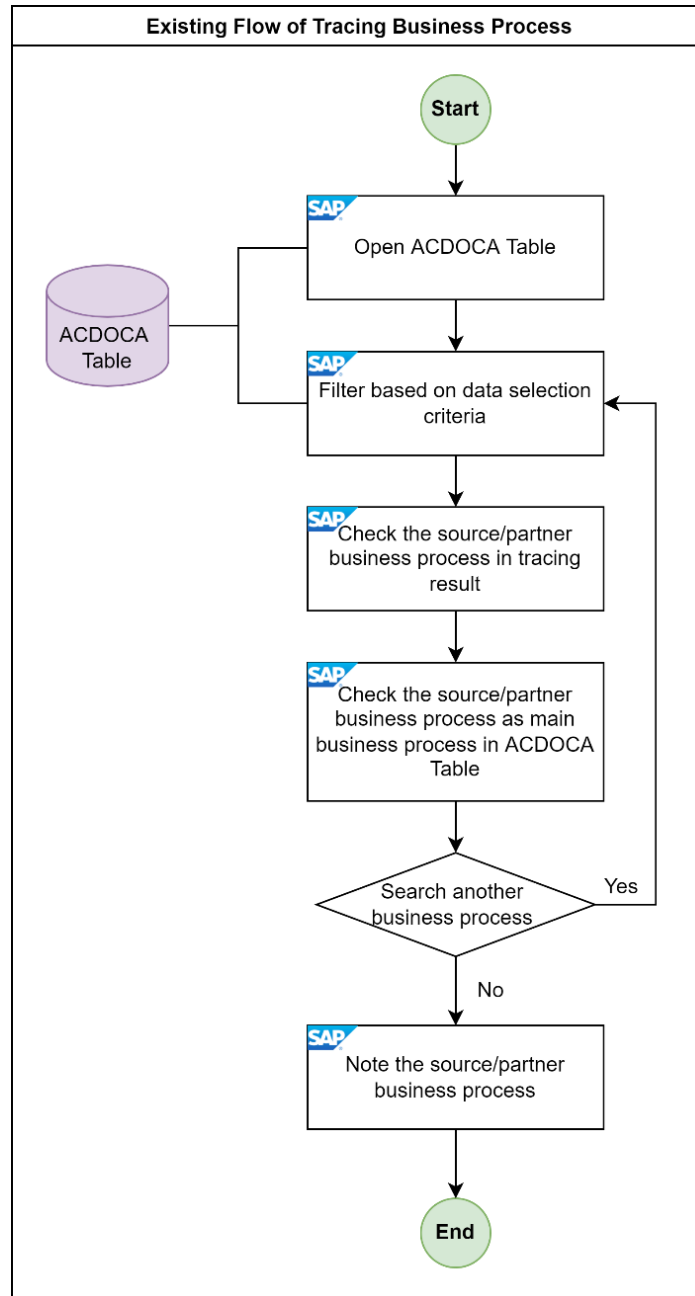


Fig. 4 Existing Flow of Tracing Business Process

Figure 4 shows the existing flow for tracing business process. As we can see from the figure, there are several steps that will take a lot of time, which is where users have to filter lots of data to find the intended business process, and if the user wants to check the next Sender/Receiver (in SAP it is also called Source/Partner) business process, then the user has to return to the main page of checking the table and re-filter data and re-enter the value of the business process that they want to check. These steps are the highlights of the problems that occur in the existing tracing business process.

After identifying problems from existing flow for tracing business process, the following is the analysis and design planning result of the identification of the things needed in making reporting for business processes on SAP S/4HANA.

- 1) The system can show the inflow from the Business Process Resource, Business Process Activity, and Business Process Cost Object for the process of cost allocation from product activities.
- 2) The system can show the outflow from the Business Process Resource, Business Process Activity, and Business Process Cost Object for the cost allocation process from product activities.

- 3) The system can provide an easily understandable or familiar display of business processes on reporting to shorten the time for tracing the business process.
- 4) The system only displays the data needed during the tracing of business processes.

*C. Analysis of Targeting ‘Tracing Business Process Flow’*

In this stage, an Interactive ALV report for tracing business process is made to check the flow of incoming and outgoing business processes. Based on the problems that occurred in the existing flow of tracing business process described earlier, the targeting business process is proposed to be applied to the business process tracing report in the SAP S/4HANA. The targeting flow can be seen in Figure 5.

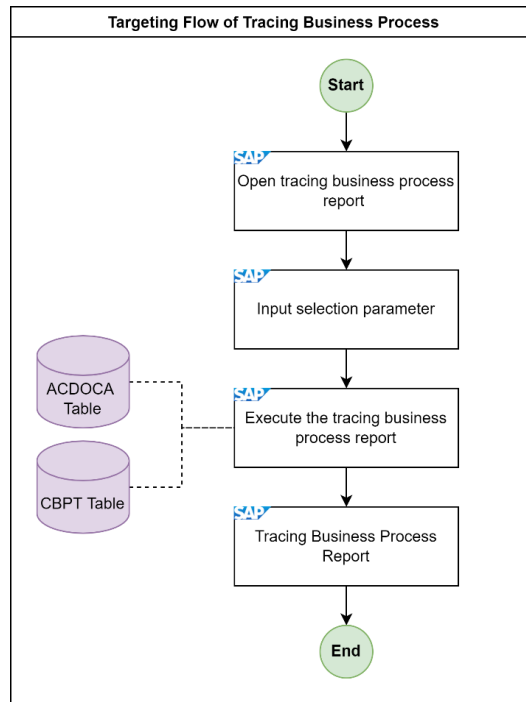


Fig. 5 Targeting Flow of Tracing Business Process

Based on Figure 5, we can see that the design process for tracing the business process has been simplified. In this design, the targeting business process has a short process to check the flow of incoming/outgoing business processes, can see the name and description of the business process and the function of the business process, and display business process data without redundancy so that the user who wants to track the business process that exists in the system won't have to waste lots of time to do this activity.

*D. Custom Report Program Design*

In this process, a business process tracing program report will be made which requires some data in the database available in SAP. There are two tables needed, namely the ACDOCA and CBPT tables. These tables will be explained more in Table 3.

Table III.  
ACDOCA and CBPT Tables

Table Name	Description	Data Needed
ACDOCA	Universal Journal Entry: A table that stores data about transactions that occur universally from several modules in SAP FI-CO.	General ledger, fiscal year, account number, sender cost center, amount in company code currency, posting period, posting date, source business process, business process, and partner business process.
CBPT	Text Table for Business Process Master: A table that stores data that contains the name and description of the business process master data.	Business process description

The data needed in Table 3 will later be combined in an internal table so that it can be displayed. The process of making an ALV Report can be seen in Figure 6.

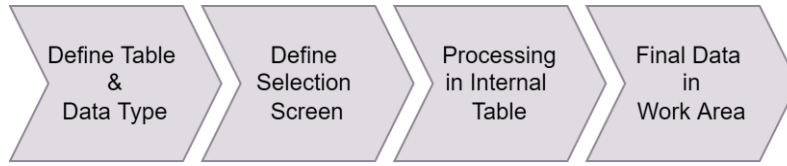


Fig. 6 Making the Interactive ALV Report

Internal table is a temporary table that contains the data that wants to be shown in ABAP program. Internal table exists only during the SAP program run-time. Internal table is used for processing large volumes of data by using the ABAP language. We need to declare an internal table in an ABAP program to use it. The internal table is fetching data for dynamic use and the line in the internal table has the same field by structure. The used of internal table is for storing and formatting data from the database inside the program [20]. In the business process tracing program, several internal tables will be created to contain the required data. After the data has already been processed in the internal table, it will be transferred to the work area so that the final data can be displayed. The required internal table can be seen in the entity-relationship diagram in Figure 7.

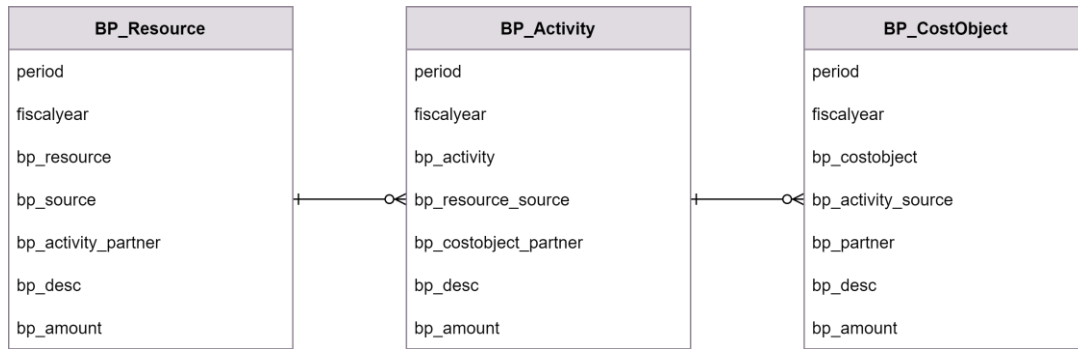


Fig. 7 Entity Relationship Diagram for Internal Table

The data that is processed in the internal table can be displayed if the user fills the selection screen according to the predefined parameters. There are several parameters that must be filled in by the user to run the business process tracing program. The selection parameters needed will be explained in Table 4.

Table 4. Selection Parameter

Selection Parameter	Table Field	Field Description
Fiscal Year	ACDOCA-GJAHR	Year, Example: '2020'
Period	ACDOCA-POPER	Month, Example: '09'
Business Process	ACDOCA-PRZNR	Business Process that wants to be traced, Example: 'PUST0354'

Based on Table 4, the selection screen is made and can be seen in Figure 8.

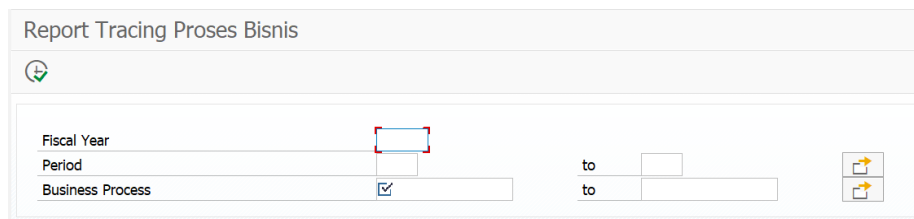


Fig. 8 Selection Screen

Users are required to fill in the selection parameters to display the data. After filling the selection parameters, the user can select the execute button to call the data and the data will appear. All data displayed for tracing business processes in the report will be drawn based on the input selection screen. The results of the Interactive ALV report can be seen in Figure 9.



Report Tracing Process Business

Period	Fiscal Yr	Posting Date	BusProcess	Descript.	In/Out	Text	PrtBusProc	Text	Account	Send. Cctr	Amnt in CC
9	2020	30.09.2020	PUST0354	Gaji Dasar	INCOMING	TO0004-122Gaji Dasar		TO0004-122Gaji Dasar	B51111011	T826E01	633.547.050,00
9	2020	30.09.2020	PUST0354	Gaji Dasar	INCOMING	TO0004-123Gaji Dasar		TO0004-123Gaji Dasar	B51111016	T826E01	58.578.802,44
9	2020	30.09.2020	PUST0354	Gaji Dasar	INCOMING	TO0004-124Gaji Dasar		TO0004-124Gaji Dasar	B51512015	T826S01	3.180.000,00
9	2020	30.09.2020	PUST0354	Gaji Dasar	INCOMING	TO0004-125Gaji Dasar		TO0004-125Gaji Dasar	B51512015	T826F01	255.000,00
9	2020	30.09.2020	PUST0354	Gaji Dasar	INCOMING	TO0004-126Gaji Dasar		TO0004-126Gaji Dasar	B51512015	T826E01	22.886.090,70
9	2020	30.09.2020	PUST0354	Gaji Dasar	INCOMING	TO0004-127Gaji Dasar		TO0004-127Gaji Dasar	B51512015	T851D01	527.217,32
9	2020	30.09.2020	PUST0354	Gaji Dasar	INCOMING	TO0004-128Gaji Dasar		TO0004-128Gaji Dasar	B51111006	T826E01	78.877.747,57
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	DDSE0001	FR0101-001FR Gaji Dasar	B99100001		21.012.821,21-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	DDTV0001	FR0101-001FR Gaji Dasar	B99100001		4.164.206,56-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	EBIS0001	FR0101-001FR Gaji Dasar	B99100001		12.456.659,35-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	EBIS0150	FR0101-001FR Gaji Dasar	B99100001		13.561.840,25-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	EBIS0299	FR0101-001FR Gaji Dasar	B99100001		32.102.987,94-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	FUNC0017	FR0101-001FR Gaji Dasar	B99100001		20.425.469,14-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	FUNC0111	FR0101-001FR Gaji Dasar	B99100001		1.747.672,18-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	FUNC0222	FR0101-001FR Gaji Dasar	B99100001		10.927.146,52-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	FUNC0404	FR0101-001FR Gaji Dasar	B99100001		11.763.823,60-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	OPAS0006	FR0101-001FR Gaji Dasar	B99100001		4.245.716,65-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0001	FR0101-001FR Gaji Dasar	B99100001		7.501.325,46-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0054	FR0101-001FR Gaji Dasar	B99100001		13.370.051,81-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0079	FR0101-001FR Gaji Dasar	B99100001		22.132.386,28-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0135	FR0101-001FR Gaji Dasar	B99100001		7.362.278,84-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0146	FR0101-001FR Gaji Dasar	B99100001		311.656,22-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0156	FR0101-001FR Gaji Dasar	B99100001		19.993.945,14-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0183	FR0101-001FR Gaji Dasar	B99100001		12.228.910,57-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0235	FR0101-001FR Gaji Dasar	B99100001		11.109.345,54-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0283	FR0101-001FR Gaji Dasar	B99100001		13.238.197,25-
9	2020	30.09.2020	PUST0354	Gaji Dasar	OUTGOING	FR0101-001FR Gaji Dasar	PUST0310	FR0101-001FR Gaji Dasar	B99100001		8.031.141,03-

Fig. 9 Interactive ALV Report for Tracing Business Process

It can be seen in Figure 9 that the report for tracing business processes contains data or information that the financial division needs to trace the flow of business processes in cost allocation activity of Activity-Based Costing. This report also contains additional data which the user can know the business process that is being checked, is the sender/receiver at column In/Out. If the data displays 'Incoming', the business process is the sender business process. Meanwhile, if the data shows 'Outgoing', then the business process is the receiver business process. The feature that makes this report become an interactive report is located in the Partner Business Process column where users can do business process tracing by simply clicking on the receiver of the main business process and turning the business process partner into the main business process.

Report Tracing Process Business

Peri.	Fiscal	Posting Date	Business Process	Description	In/Out	Text	Part. Bus. Process	Text
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	OUTGOING	TO0008-001By KARYAWAN DDS		TO0008-001
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	OUTGOING	TO0008-002By KARYAWAN DDS		TO0008-002
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	OUTGOING	TO0008-215By KARYAWAN DDS		TO0008-215
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-001FR Gaji Dasar	PUST0354	FR0101-001F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-003FR Tunjangan PPh Ps 21 OPHAR	PUST0356	FR0101-003F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-006FR Tunjangan Hari Raya Keagama	PUST0359	FR0101-006F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-009FR BBP	PUST0362	FR0101-009F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-010FR BFPT	PUST0363	FR0101-010F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-011FR By Pengobatan	PUST0364	FR0101-011F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-013FR By Asuransi Kesehatan Diri	PUST0366	FR0101-013F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-015FR By Bantuan Peningkatan Kese	PUST0368	FR0101-015F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-018FR By Penghargaan	PUST0371	FR0101-018F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-019FR By Jasa Produksi	PUST0372	FR0101-019F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-021FR By Bantuan Pensiun	PUST0374	FR0101-021F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-022FR Insentif Premium	PUST0375	FR0101-022F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-023FR Insentif Jabatan	PUST0376	FR0101-023F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-024FR Bantuan Kemahalan	PUST0377	FR0101-024F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0101-025FR By BPJS Ketenagakerjaan-Jam	PUST0378	FR0101-025F
9	2020	30.09.2020	DDSE0001	By KARYAWAN DDS	INCOMING	FR0102-646FR By KARYAWAN DDS	OPAS0057	FR0102-646F

Fig. 10 Tracing Sender/Receiver Business Process

Figure 10 is the result of the user clicking on a partner business process. As an example, if the user clicked on the partner business process 'DDSE0001', this business process will be the main business process and would display data for business process 'DDSE0001'. This process will be run continuously if the user wants to carry out until the last business process.

#### IV. CONCLUSION

This research concludes that developing Interactive ALV reports for tracing business processes in the SAP system is a good solution for XYZ Company, specifically for the financial unit in conducting the cost allocation process. The iterative and incremental methodology stages produce a final solution in the form of an interactive ALV report tracing business process, which has a continuous tracing feature to overcome problems that occur in tracing business processes. This Interactive ALV Report is a solution for PT XYZ because it can display detailed information regarding data related to business processes in cost allocation reporting, to assist the actual assessment cycle process. This customization report will simplify the existing steps of tracing business process so this report can display only the data needed in business process tracing for each business process available in the cost allocation process. This report can be displayed with only one program execution. This research also gives the result that users can see the Sender/Recipient of the business process, and the user can track the business process from the beginning until the last process. This report can save the user's time to search for business processes.

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